

*Aug 9, 2000*

#12

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: )  
Jonnie R. WILLIAMS )  
Serial No. 08/998,043 ) Group Art Unit: 1731  
Filed: December 23, 1997 ) Examiner: Ruller, J.  
For: TOBACCO PRODUCTS HAVING ) Atty. Dkt. No.: 04859.84699  
REDUCED NITROSAMINE CONTENT )

**DECLARATION OF WILLIAM Z. HUDSON**

Honorable Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

I, William Z. Hudson, 5405 Krolan Ct., Chester, VA 23831 hereby declare:

1. I am an employee of Star Tobacco and Pharmaceuticals, Inc. and have a degree in chemistry from North Carolina State University.
2. In order to simulate the process or heating tobacco identified in Heljo U.S. Patent 2,758,603 we obtained a Thermex, model T10GB dielectric oven which provided high energy electromagnetic heating at a frequency of 27 megacycles.
3. We also obtained samples of Burley tobacco which were treated with a 4% sugar solution and which had a total moisture content of approximately 17%. Further we obtained samples of flue-cured tobacco having a moisture content of 21% which is the midpoint of the range of Example 1 of the Heljo patent.
4. Tests demonstrate that heating of the tobacco in the oven caused the tobacco to dry and to show signs of charring, even on short 3 minute cycles. In order to more closely simulate

Heljo, tobacco was placed in a transparent Ziploc storage bag and a small amount of additional water was included in the lower portion of the bag. By using this technique, temperatures in the range of 80-120°C were obtained.

5. More particularly, flue-cured tobacco having a moisture content of 21% was placed in a transparent Ziploc storage bag together with two tablespoons of water. The bag was heated in the dielectric oven for 44 seconds after which it was removed from the oven and the temperature of the tobacco was measured. It is estimated that the removal of the screws which secured the oven door and the measurement of the tobacco temperature consumed from about 15 to about 30 seconds so that the total time between the initiation of the heating and the measurement of the temperature was on the order of 1 minute to 1 minute and 15 seconds. The temperature of the flue-cured tobacco was measured to be 200°F (93.3°C). The tobacco was then removed from the pouch and exposed to ambient conditions. This was identified at run No. 10.

6. In a second test with flue-cured tobacco, the tobacco in a transparent Ziploc storage bag together with a 2 tablespoons of water was heated for 35 seconds and the temperature was measured to be 160°F (71°C). Because of the lower temperature, the bag was reinserted into the oven and heated for another 26 seconds. When it was removed from the oven the second time the temperature was measured to be 193°F (89.4°C). The total time the tobacco was at an elevated temperature approximated 2½ minutes. This was identified as run No. 9.

7. Burley tobacco was placed in a transparent Ziploc storage bag and heated for 1 minute. Upon removal from the oven, the temperature was measured to be 198°F (92°C). Once again it required approximately 15 to 30 seconds to unsecure the oven door and to make a measurement. Upon completion of the temperature measurement, the tobacco was removed from the Ziploc bag and exposed to ambient conditions. This was identified as run No. 7.

8. Burley tobacco was placed in a transparent Ziploc storage bag with two tablespoons of water and heated for 1 minute. Following removal from the oven, the temperature of the tobacco was measured to be 180°F (82°C). The total time was approximately 1½ minutes. Following measurement of the temperature, the tobacco was removed from the bag and exposed to room temperature. This was identified as run No. 11.

9. A picture of the Thermex oven (taken before Ziploc bags were used) is shown in Attachment A. A picture of Burley tobacco in its Ziploc bag is shown in Attachment B.

10. I hereby acknowledge that all statements made herein of my own knowledge are true and that all statements made herein on information and belief are believed to be true. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. § 1001), and may jeopardize the validity of the application or any patent issuing thereon.

Date: 3-28-00

William Z. Hudson  
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